DOCKET NO: ***01-AFC-24*** MOTION FOR WORKSHOP

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STATE OF CALIFORNIA
State Energy Resources
Conservation and Development Commission

In the matter of:	)	
	)	DOCKET NO: ***01-AFC-24***
	)	
Palomar Energy, LLC	)	PETITION FOR COMMITTEE
Application for Certification of	)	WORKSHOP ON THE
Palomar Energy Power Plant	)	SUBJECT OF ALTERNATIVE
	)	COOLING OPTIONS

Bill Powers hereby petitions the Siting Committee to conduct a Committee Workshop on the subject of alternative cooling options to be held before the staff completes the Final Staff Assessment.

This Petition is made on the grounds that:

During the public comment period of the March 21, 2002 initial Palomar Energy Project workshop in Escondido I stated that the CEC staff needed to consider alternative cooling options to the proposed use of reclaimed water. I followed that with a petition to the San Diego APCD on May 27, 2002 that a Best Available Control Technology (BACT) evaluation be performed on cooling options for the site. In early August I provided to the CEC comments on the BACT that was prepared by the project proponent, as well as documents discussing alternative proposed uses of HARRF reclaimed water, and called for the CEC to delay the issuance of the PSA until CEC staff had an opportunity to study the cooling options and had included the results of that analysis in the PSA. My request to have cooling options included in the PSA was denied on August 21, 2002. This denial is the only official acknowledgement of any kind I have received from the CEC on any of my statements or submittals related to the Palomar Energy Project cooling system issue.

It is understandable that CEC staff, given the current workload and the historic encouragement of reclaimed water use in power plants, would not embrace a request to re-examine the reclaimed water issue. Nevertheless, the subject needs to be addressed. Because staff has been reluctant to investigate this key option, I am petitioning the Committee to hold a workshop on the cooling alternatives for the Palomar Energy Project. The Committee's decision in this case should be taken from a position of complete knowledge on the implications of the cooling approach currently proposed and the options to that approach. These issues need to be framed prior to the evidentiary hearings.

This is an important policy question that will have ramifications in future citing decisions. Will the CEC look at reclaimed water use in cooling towers as one of two options, the other being dry cooling, and determine the relative merits of these two options based on the site-specific

environment? Or will the CEC continue to endorse the use of reclaimed water in cooling towers as the preferred option in all cases where reclaimed water is available? This issue needs to be framed by the Commission to give policy direction to the Commission staff. It is important to hold the workshop prior to the Palomar Energy Project evidentiary hearings. I recommend a one-day workshop in Sacramento as the most efficient venue for such a workshop.

BACKGROUND

The CEC has encouraged the use of reclaimed water without reservation as a power plant cooling medium since the 1970s, principally to protect California's freshwater resources. This approach was entirely appropriate in an era when there was no viable option to water as a power plant cooling medium, and few uses had been developed for reclaimed water. Since the mid-1990s, two developments have occurred that warrant taking a fresh look at a policy of blanket endorsement of reclaimed water as the preferred cooling medium in all cases: 1) the advent of dry cooling as a mainstream option to wet cooling towers in power plants, 2) every increasing uses of reclaimed water in certain regions of California, primarily to reduce pressure on overdrawn existing freshwater resources, such as the Colorado River, that can reasonably be perceived as uses of greater strategic importance than evaporating this water in a power plant cooling system, or converting it to brine in the same system.

The appropriateness of using reclaimed water appears to be very site-specific. In the case of the Metcalf Project, the region was under order from the RWQCB to reduce wastewater flows into San Francisco Bay. There are apparently very limited potential uses for reclaimed water in the local area, and no issues related to periodic, severe droughts. The project site is located in an unpopulated area with only one or two ranch houses located within a one-mile radius of the site. The project developer purchased 131 acres around the proposed project as a nature preserve/ greenbelt. In addition to the $3,000,000 value of the land, the developer provided a $1,300,000 land management endowment. Evaporation of reclaimed water in the Metcalf Project cooling towers appears to be a reasonable response to local conditions.

The CEC is currently recommending the use of reclaimed water in a once-through cooling system for the El Segundo Project. This appears to be a truly creative and excellent use of reclaimed water, as it provides power plant cooling and is still available for other uses should they be developed over time. In this case, the El Segundo plant is located in close proximity to one of the largest wastewater treatment plants in the nation (Hyperion), with a reclaimed water production capacity approaching 500,000,000 gallons/day. This tremendous reclaimed water production capacity means Hyperion can meet the power plant's need for up to 300,000,000 gallons/day of once-through cooling water. This is probably not possible at any other site in California.

Escondido and San Diego County are in a very different situation than the two cases cited above. San Diego County is a desert region, with inconsequential local water supplies relative to the population. The region is subject to chronic drought, and is currently experiencing the most severe drought on record. Virtually all water in the County is imported from the Colorado River or Northern California. California is currently overdrawing from the Colorado River, and it is clear that additional withdrawals are not an option. A new dam is currently being constructed near Escondido to increase freshwater storage capacity in the County, and other dam sites are being carefully studied. High value uses exist for the reclaimed water being produced in

Escondido at the Hale Avenue Resource Recovery Facility (HARRF). These uses are agricultural irrigation and aquifer re-injection to produce potable water.

Much of HARRF's reclaimed water production was originally to be used in the avocado groves for which Escondido is famous. Lack of a "spirit of cooperation" between local growers and Escondido Public Works seems to be one of the principal reasons this did not happen in the mid-1990s. Education, outreach, appropriate reclaimed water pricing, and potentially regulation will drive much greater use of reclaimed water in the groves, if this water has not already been irrevocably allocated to power plant use. In addition, the City of San Diego has plans to inject a major portion of HARRF's reclaimed water into the San Pasqual Valley aquifer to produce up to 8,000 acre-ft/yr of potable water. These are excellent, high value uses of HARRF reclaimed water.

The use of reclaimed water in avocado groves is already underway in the local area. The town of Ramona, adjacent to Escondido, is providing reclaimed water to a major local avocado grower who is using it successfully. Ramona is currently evaluating the best path to continued expansion of reclaimed water use in local groves.

Allocating 3,600,000 gal/day of HARRF reclaimed water to the Palomar Energy Project essentially eliminates any possibility of using this water in more strategically valuable applications for the 50-year lifespan of the power plant. During this 50-year period the pressure on water resources in San Diego County will undoubtedly become more severe.

For the site-specific case of the Palomar Energy Project, dry cooling would appear to be a superior cooling approach from a strategic resources standpoint than use of reclaimed water in wet cooling towers. A dry cooling system at this site would be more cost-effective that the proposed wet system, emit no PM_{10}, eliminate issues related to visible cooling tower plumes, eliminate the possibility that existing nearby residents would be exposed to Legionella bacteria contained in cooling tower drift, have minimal negative impact on the energy efficiency of the power plant, and leave the HARRF reclaimed water available for more strategically valuable uses where water is the only option (agriculture, aquifer reinjection).

WORKSHOP AGENDA AND DATE

Proposed workshop agenda [four (4) hour morning or afternoon workshop]:

- Current and future water needs in Escondido and San Diego County
- Alternative uses for reclaimed water in the local area;
- Advantages/disadvantages of wet cooling using reclaimed water in PEP cooling towers;
- Feasibility of dry cooling at the PEP site and advantages/disadvantages;
- Description of optimized dry cooling system at the PEP site.

The content of the proposed workshop would come principally from material that I have already provided to CEC staff. For this reason little preparation time will be necessary and the workshop can take place on any date after October 4, 2002.

CONCLUSION

The Siting Committee reviewing the Palomar Application for Certification (AFC) needs to provide policy guidance to staff charged with the responsibility to prepare an independent analysis of the AFC. A workshop held in Sacramento is an effective way to inform the Committee and provide the information needed to examine Commission policy and to establish the issues to be heard during future evidentiary hearings.

September 25, 2002
Date

Signature

See letters in support of Petition attached as Exhibit A and Exhibit B. Other letters are anticipated and will be docketed as they arrive.